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Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10/075,507
		Filing Date	February 12, 2002
		First Named Inventor	Stanley S. Toncich
		Art Unit	2811
		Examiner Name	To Be Assigned
Sheet	1	of	6
		Attorney Docket Number	UTL 00160

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. 1	Document Number Number - Kind Code* (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US- 5,729,239	03-17-1998	Rao, Jagannathan B.L.	
	2	US- 6,049,726	04-11-2000	Gruenwald, Werner, et al.	
	3	US- 6,160,524	12-12-2000	Wilber, William	
	4	US- 6,198,441 B1	03-06-2001	Okabe, Hiroshi	
	5	US- 6,028,561	02-22-2000	Takei, Ken	
	6	US- 5,973,567	10-26-1999	Heal, Mark D., et al.	
	7	US- 4,475,108	10-02-1984	Moser, Kenneth R.	Abstract, Fig. 1
	8	US- 3,678,305	07-18-1972	George, Edward	
	9	US- 3,918,012	11-04-1975	Peuzin, Jean Claude	
	10	US- 5,450,092	09-12-1995	Das, Satyendranath	
	11	US- 6,333,719 B1	12-25-2001	Varadan, Vijay K.	
	12	US- 5,212,463	05-18-1993	Babbitt, Richard W., et al.	
	13	US- 4,733,328	03-22-1988	Blazej, Daniel C.	
	14	US- 5,617,104	04-01-1997	Das, Satyendranath	
	15	US- 5,307,033	04-26-1994	Koscica, Thomas E., et al.	
	16	US- 5,427,988	06-27-1995	Sengupta, Louise, et al.	
	17	US- 5,557,286	09-17-1996	Varadan, Vijay K., et al.	
	18	US- 5,561,407	10-01-1996	Koscica, Thomas E., et al.	
	19	US- 5,589,845	12-31-1996	Yandrofski, Robert M.	
	20	US- 5,496,795	03-05-1996	Das, Satyendranath	

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. 1	Foreign Patent Document Country Code 3 - Number* - Kind Code* (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	21	WO 00/62367	10-19-2000	Carlsson, Erik, et al.	
	22	JP 29-05-00 2001338839	07-12-2001	Tsuneo, Mishima	
	23	EP 0 637 131 A1	02-01-1995	Fujita Masanori	
	24	EP 0 843 374 A2	05-20-1998	uller, Frithjof E., et al.	Abstract, Fig. 1
	25	EP 0 638 953 A1	02-15-1995	Yasuoka, et al.	
	26	WO 00/35042	06-15-2000	engupta, Louise, et al.	
	27	EP 0 680 108 A1	11-02-1995	Atokawa, Masayuki	
	28	EP 0 881 700 A1	12-02-1998	Atokawa, Masayuki	
	29	WO 00/28613	05-18-2000	engupta, Louise, et al.	
	30	DE 40 36 866 A1	07-25-1991	Yamamoto, Masaki	

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		Attorney Docket Number	UTL 00160

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	31	us- 6,097,263	08-01-2000	Mueller, Carl H., et al.	
	32	us- 5,987,314	11-16-1999	Salto, Atsushi	
	33	us- 5,472,935	12-5-1995	Yandrofski, Robert, et al.	
	34	us- 4,799,066	01-17-1989	Deacon, Malcolm J.	
	35	us- 5,166,857	11-24-1992	Avanic, Branko, et al.	
	36	us- 5,880,921	03-09-1999	Tham, J.L. Julian, et al.	
	37	us- 5,640,042	06-17-1997	Koscica, Thomas E., et al.	
	38	us- 4,835,499	05-30-1989	Pickett, Michael N.	Abstract, Fig. 3
	39	us- 3,413,543	11-26-1968	Schubring, et al.	Col. 4, lines 3- 31, Fig. 2
	40	us- 5,945,887	08-31-1999	Makino, Toshihiro, et al.	
	41	us- 5,973,568	10-26-1999	Shapiro, Gary, et al.	
	42	us- 5,216,392	06-01-1993	Fraser, Randall S.	
	43	us- 3,676,803	07-11-1972	Simmons, William J.	
	44	us- 3,836,874	09-17-1974	Maeda, Minoru, et al.	
	45	us- 5,778,308	07-07-1998	Sroka, Peter, et al.	
	46	us- 5,777,524	07-07-1998	Wojewoda, Carl E., et al.	
	47	us- 6,052,036	04-18-2000	Enstrom, Hakan, et al.	
	48	us- 6,292,143 B1	09-18-2001	Romanofsky, Robert R.	
	49	us- 5,617,104	04-01-1997	Das, Satyendranath	
	50	us-			

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		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
	51	EP 1 043 741 A2	10-11-2000	Klee, Mareike, et al.		
	52	EP 0 795 922 A1	09-17-1997	Tsuru, Teruhisa, et al.		
	53	EP 0 909 024 A2	04-14-1999	Nakamichi, et al.		
	54	WO 00/79648 A1	12-28-2000	Varadan, Vijay K., et al.		
	55	WO 00/79645 A1	12-28-2000	Falk, Kent, et al.		
	56	WO 94/13028	06-09-1994	Yandrofski, et al.	Col. 8, lines 9-26,	
	57				Figs. 30-31; p. 14,	
	58				par. 4, abst.,	
	59				figs. 2, 4, 11	
	60					

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10/075,507
		Filing Date	February 12, 2002
		First Named Inventor	Stanley S. Toncich
		Group Art Unit	2811
		Examiner Name	To Be Assigned
		Attorney Docket Number	UTL 00160
Sheet	3	of	6

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
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	61	A. Presser, "Varactor-Tunable, High-Q Microwave Filter," RCA Review, Vol. 42, Dec. 1981, pp. 691-705.	
	62	C. Chang and T. Itoh, "Microwave Active Filters Based on Coupled Negative Resistance Method," IEEE Trans. on Microwave Theory and Techniques, Vol. 38, No. 12, Dec. 1990, pp. 1879-1884.	
	63	P. Katzin, B. Bedard, and Y. Ayasli, "Narrow-Band MMIC Filters with Automatic Tuning and Q-Factor Control," 1993 IEEE MTT-S Int. Microwave Symp. Digest pp.403-406.	
	64	B. Hopf, I. Wolff, and M. Guglielmi, "Coplanar MMIC Active Bandpass Filters Using Negative Resistance Circuits," 1994 IEEE MTT-S Symposium Digest, pp. 1183-1185.	
	65	U. Karacaoglu and I.D. Robertson, "High Selectivity Varactor-Tuned MMIC Bandpass Filter Using Lossless Active Resonators," 1994 IEEE MTT-Symposium Digest, pp. 1191-1194.	
	66	B. Nauta, "A CMOS Transconductance-C Filter Technique for Very High Frequencies," IEEE Journal of Solid-State Circuits, Vol. 27, No. 2, February 1992, pp. 142-153.	
	67	K Fujita, H. Itoh, R. Yamamoto, "A 15.6 GHz Commercially Based 1/8 GaAs Dynamic Presealer," 1989 IEEE GaAs IC Symposium, pp. 113-116.	
	68	J. Smuk, P. Katzin, "MMIC Phase Locked L-S Band Oscillators," 1994 IEEE GaAs Symposium Digest, pp. 27-29.	
	69	S. R. Chandler, I. C. Hunter, and J.G. Gardiner, "Active Varactor Tunable Bandpass Filter," IEEE Microwave and Guided Wave Letters, Vol. 3, No. 3, March 1993, pp. 70-71.	
	70	I. C. Hunter and John D. Rhodes, "Electronically Tunable Microwave Bandpass Filters," IEEE Trans. on MTT, Vol. 30, No. 9, September 1982, pp. 1354-1367.	
	71	S. Toyoda, "Quarter-wavelength Coupled Variable Bandstop and Bandpass Filters Using Varactor Diodes," IEEE Trans. on Mtt, Vol. 30, No. 9, September 1982, pp. 1387-1389.	

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	72	B. Yu. Kapilevich, "Variety of Approaches to Designing Microwave Active Filters," Proc. 27th European Microwave Conf., Jerusalem, Vol. 1, 1997, pp. 397-408.	
	73	B. Yu. Kapilevich, "Understand the Operation of Channelized Active Filters," Microwaves & RF, January 1997, pp. 89-92.	
	74	M. Dishal, "Alignment and Adjustment of Synchronously Tuned Multiple Resonator-Circuit Filters" Proc. IRE 39, November 1951, pp. 1448-1455.	
	75	S. B. Cohn, "Dissipation Loss in Multiple-Coupled-Resonator Filters," Proc. IRE 47, August 1959, pp. 1342-1348.	
	76	G. L. Matthaei, "An Electronically Tunable Up-Converter," Proc. IRE 49, November 1961, pp. 1703-1704.	
	77	E. G. Fubini and E.A. Guillemin, "Minimum Insertion Loss Filters," Proc. IRE 47, January 1959, pp. 37-41.	
	78	W.J. Getsinger, "Prototypes for Use in Broadbanding Reflection Amplifiers," IEEE Trans. PTGMITT-11, November 1963, pp. 486-497.	
	79	E.S. Kuh and M. Fukada, "Optimum Synthesis of Wide-Band Parametric Amplifiers and Converters," IRE Trans. PCCT-8, December 1961, pp.410-415.	
	80	W. J. Getsinger and G.L. Matthaei, "Some Aspects of the Design of Wide-Band Up-Converters and Nondegenerate Parametric Amplifiers," IEEE Trans. PTGMITT-12, January 1964, pp. 77-87.	
	81	R. L. Slaven, "Design of a Tunable Multi-Cavity Waveguide Band-Pass Filter," 1959 IRE National Convention Record, Part 3, pp. 91-112.	
	82	J.J. Taub and B. F. Bogner, "Design of Three-Resonator Dissipative Band-Pass Filters Having Minimum Insertion Loss," Proc. IRE 45, pp. 681-687 (May 1957).	

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	83	K.L. Kotzebue, "Broadband Electronically-Tunable Microwave Filters," 1960 IRE Wescon Convention Record, Part 1, pp.21-27.	
	84	J.P. Louhos and I. Pankinaho, "Electrical Tuning of Integrated Mobile Phone Antennas," Nokia Mobile Phones, pp. 69- 97 (September 15, 1999).	
	85	P. K. Panayi, M. Al-Nuaimi, and L. P. Ivissimtzis, "Tuning Techniques for the Planar Inverted-F Antenna," National Conference on Antennas and Propagation Publication, No. 461, pp. 259-262 (April 1999).	
	86	Satoshi Makioka, et al., "A High Efficiency GaAs MCM Power Amplifier for 1.9 GHz Digital Cordless Telephones," IEEE 1994 Microwave and Millimeter-Wave Monolithic Circuits Symposium, pp. 51-54 (1994).	
	87	V. K. Varadan, K. A. Jose, V. V. Varadan, "Design and Development of Electronically Tunable Microstrip Antennas," IOP Publishing Ltd., pp.238-242 (1999).	
	88	Communication Relating to the Results of the Partial International Search: PCT/IB 02/01077 (2002).	
	89	International Search Report: PCT/IB 02/01086 (June 24, 2002).	
	90	International Search Report: PCT/IB 02/01078 (July 10, 2002).	
	91	International Search Report: PCT/IB 02/01087 (July 19, 2002).	
	92	International Search Report: PCT/IB 02/01107 (July 11, 2002).	
	93	International Search Report: PCT/IB 02/01120 (July 11, 2002).	

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	94	International Search Report: PCT/IB 02/01098 (July 4, 2002).	
	95	International Search Report: PCT/IB 02/01082 (July 8, 2002).	
	96	International Search Report: PCT/IB 02/01144 (July 12, 2002).	
	97	International Search Report: PCT/IB 02/01026 (June 28, 2002).	
	98	International Search Report: PCT/IB 02/01027 (June 25, 2002).	
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